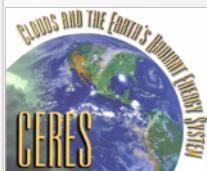
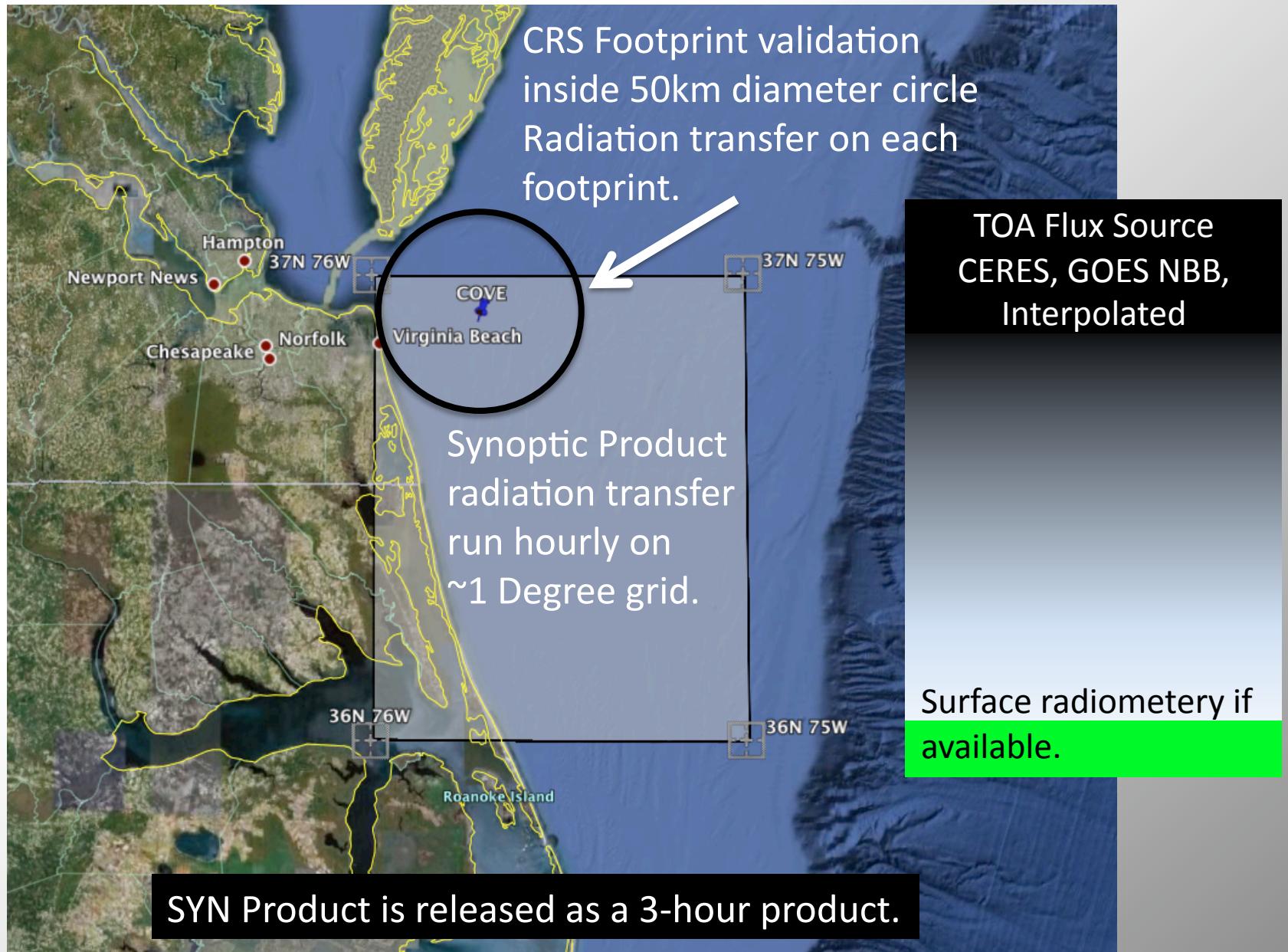




CERES “SYN” Synoptic Product Validation



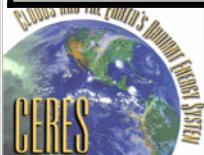


SYNI (hourly) at CRS (Footprint) Time

ARM/SGP
(E13)

Three years from Aqua Product: July 2002 through Oct 2005, Untuned

E13 Site	Observed Mean		Bias		RMS		correlation		N	
	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI
Quantity (Untuned)	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI
SW TOA UP	275	273	1	1	27	24	0.99	0.99	1127	1125
LW TOA Up	255	256	-1	-4	9	9	0.98	0.98	1127	1125
SW Surface Down	594	584	9	-1	104	78	0.92	0.95	1127	1076
LW Surface Down	356	356	-16	-16	22	22	0.97	0.97	1127	1075
TOA Albedo	28.5	28.7	0.08	0.2	2.9	2.9	0.98	0.98	1127	1125
Surface Transmiss.	58.8	58.9	0.77	-0.1	10.1	8.0	0.90	0.89	1127	1076



(Fluxes in W/m²; Albedo and transmission in %)



SYNI (hourly) at CRS (Footprint) Time

Three years from Aqua Product: July 2002 through Oct 2005, Untuned



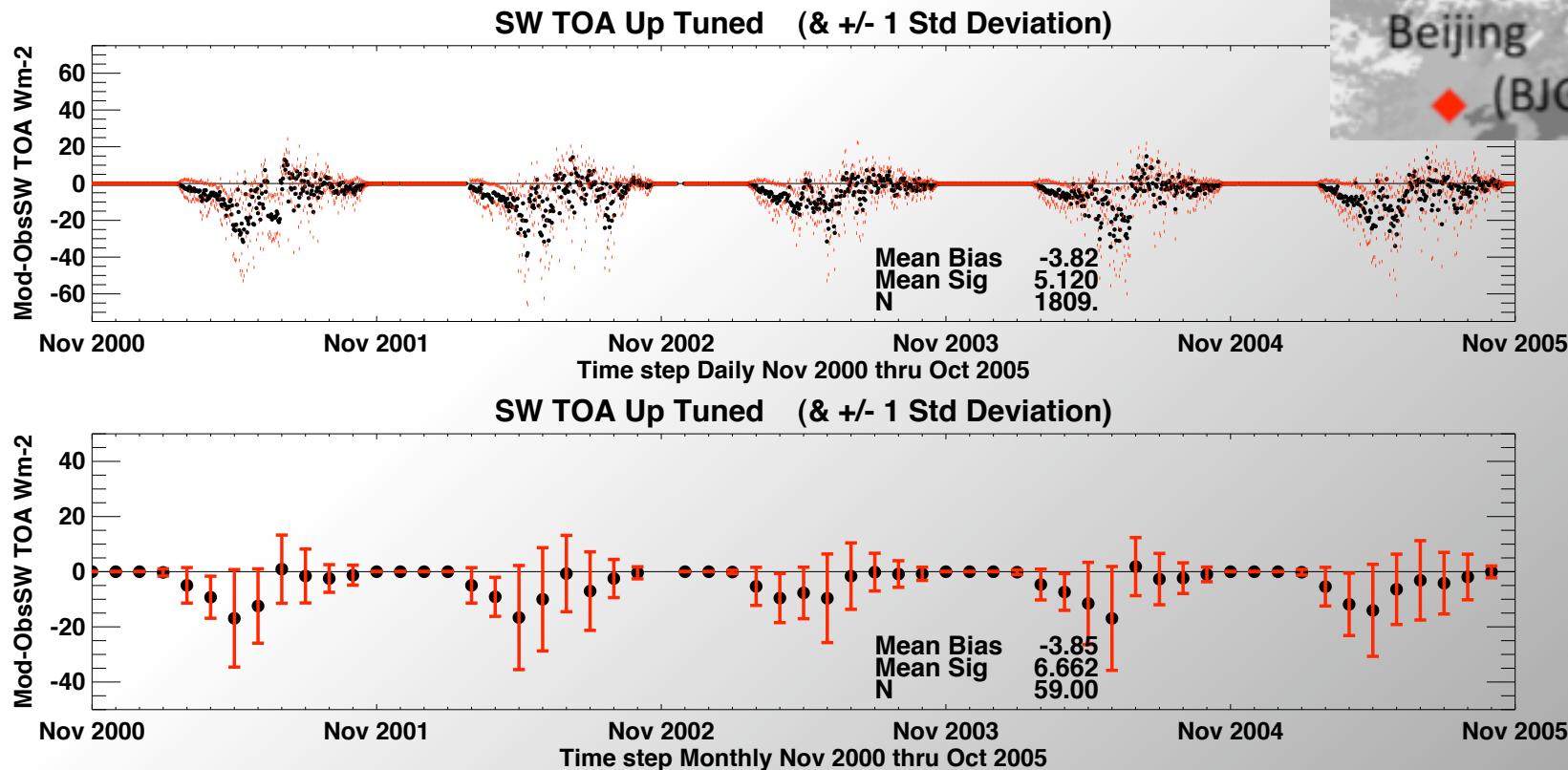
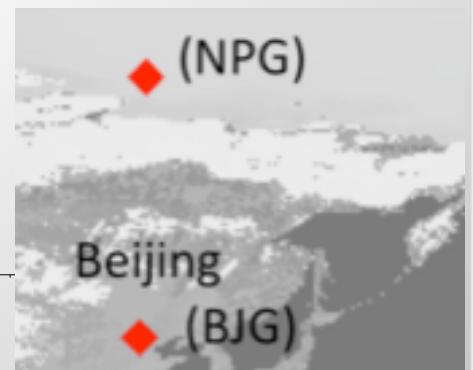
COVE Site	Observed Mean		Bias		RMS		Correlation		N	
	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI	CRS	SYNI
Quantity (Untuned)										
SW TOA UP	241	240	19	12	30	23	0.99	0.99	1092	722
LW TOA Up	237	238	3	1	9	9	0.98	0.98	1092	722
SW Surface Down	551	533	-1	-8	91	99	0.97	0.93	1092	672
LW Surface Down	339	338	14	16	20	23	0.98	0.96	1092	706
TOA Albedo	24.9	25.3	2.0	1	3.1	2.5	0.99	0.99	1092	722
Surface Transmiss.	54.9	54.3	-0.1	-1	8.8	9.6	0.93	0.92	1092	672

(Fluxes in W/m²; Albedo and transmission in %)

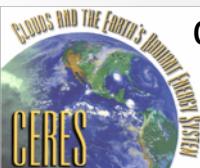




Time history of Daily & Monthly mean Bias +/- 1 Std Deviation (N Pole Ice Grid Box "G")



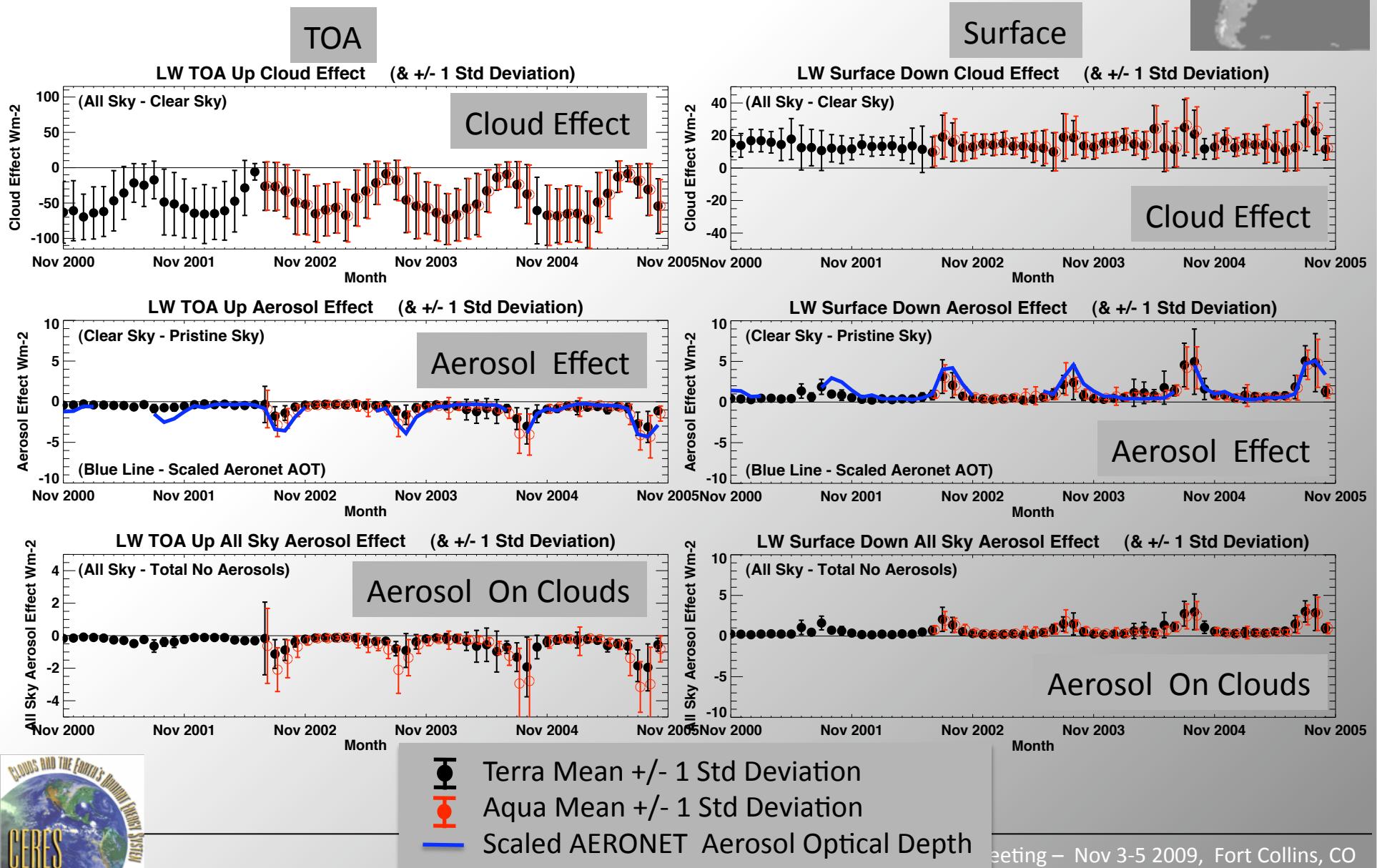
You can see a general decrease in bias upon entering spring (daylight) until Surface albedo algorithm 'catches' ice change in it's history map. And/Or ice disappears and now retrieving surface albedo for open ocean.





LW Flux Cloud & Aerosol Effect

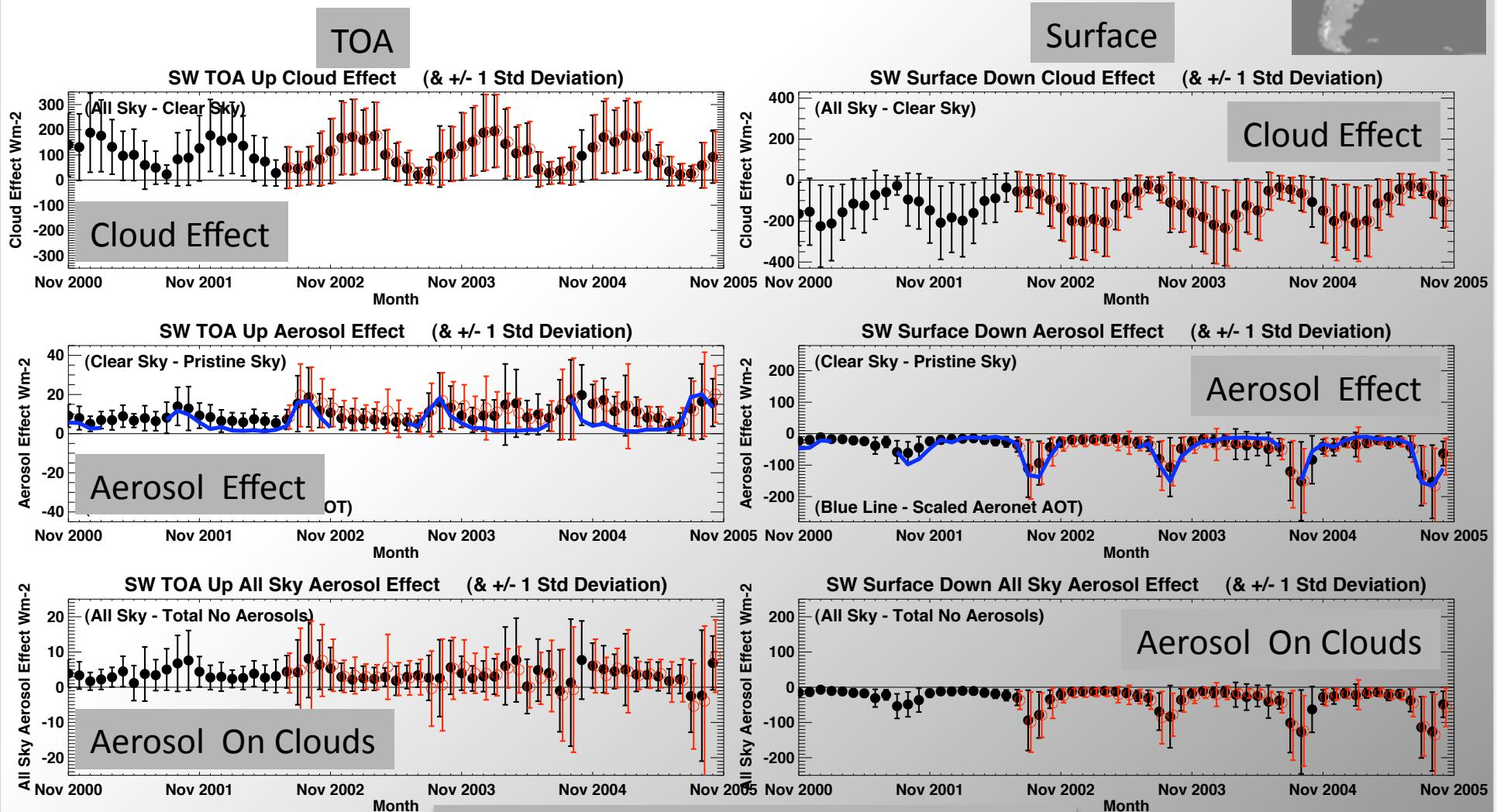
Abracos Hills, Brazil (ABH)





SW Flux Cloud & Aerosol Effect

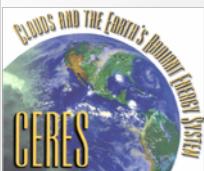
Abracos Hills, Brazil (ABH)



Terra Mean +/- 1 Std Deviation

Aqua Mean +/- 1 Std Deviation

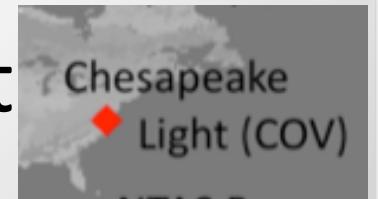
Scaled AERONET Aerosol Optical Depth



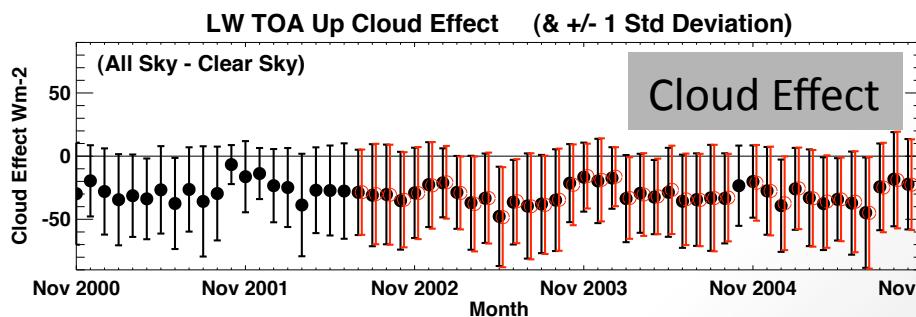


LW Flux Cloud & Aerosol Effect

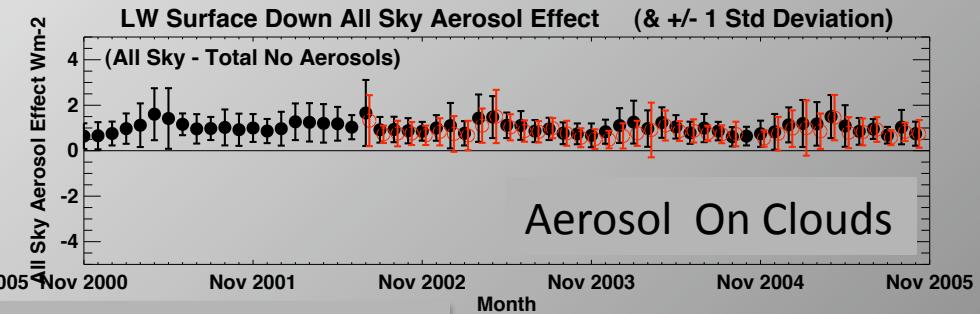
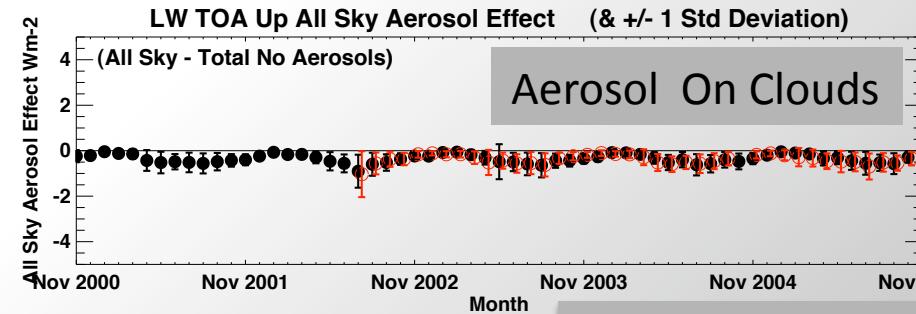
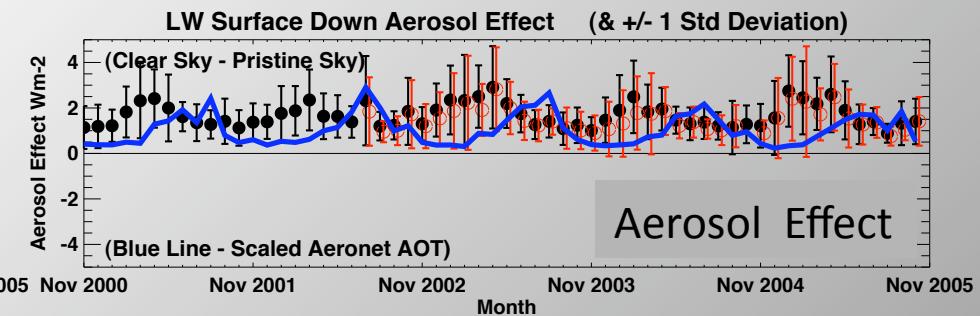
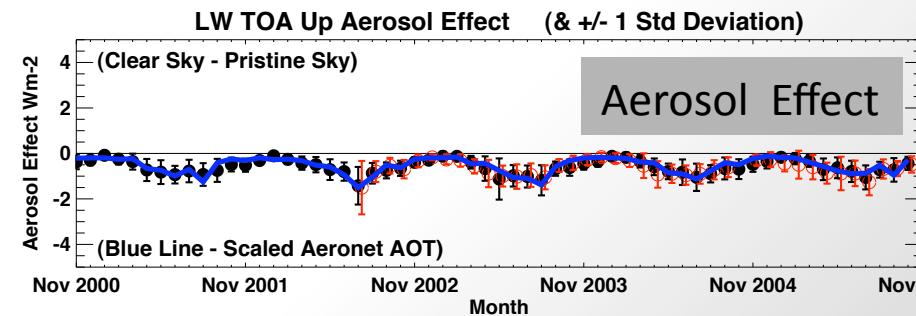
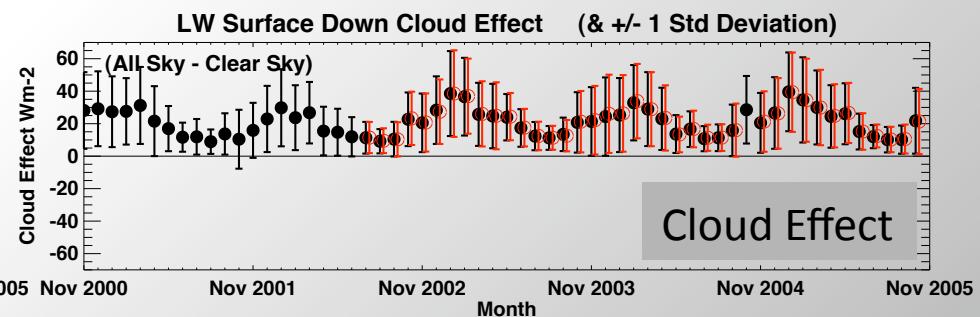
Chesapeake Light House (COV)



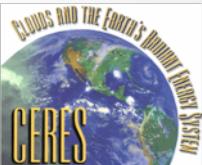
TOA



Surface



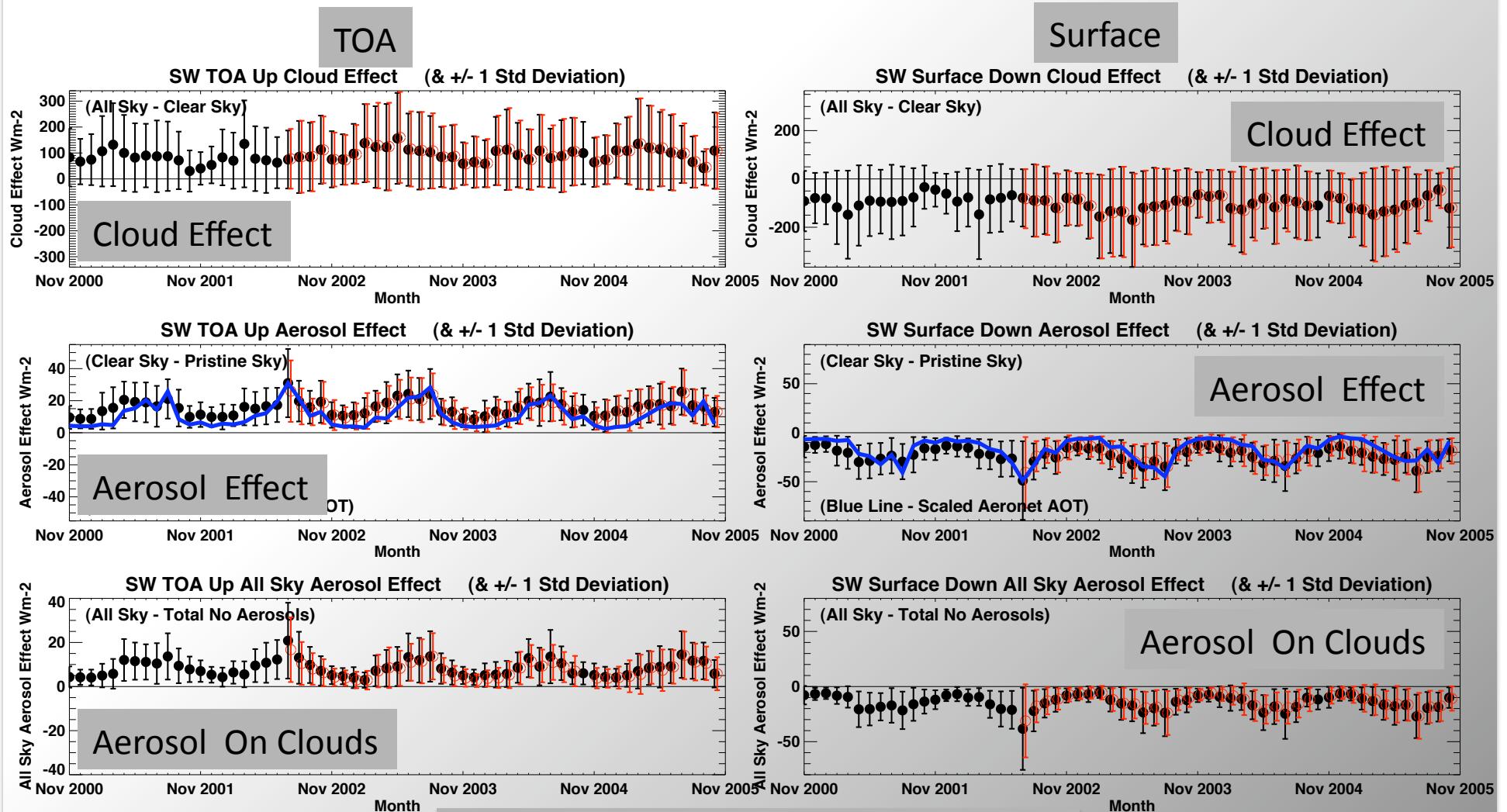
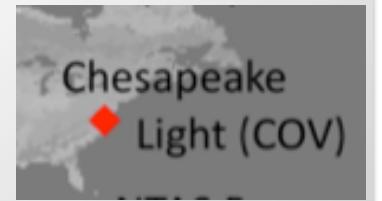
Terra Mean +/- 1 Std Deviation
Aqua Mean +/- 1 Std Deviation
Scaled AERONET Aerosol Optical Depth





SW Flux Cloud & Aerosol Effect

Chesapeake Light House (COV)



Terra Mean +/- 1 Std Deviation
Aqua Mean +/- 1 Std Deviation
Scaled AERONET Aerosol Optical Depth

